

HOANG DUONG VU

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EDUCATION

Iowa State University

Bachelor of Science in Computer Science

Expected Graduation: Spring 2023

Major GPA: **3.68/4.0**

Honors: Dean's List (4 Semesters)

Cumulative GPA: **3.58/4.0**

Skills: ReactJS, .NET Core, Spring Boot, Flask, NodeJS, Google Cloud Run Languages: Java, C#, JavaScript, Python, C, C++

Coursework: Design and Analysis of Algorithms, Principles of Artificial Intelligence, Introduction to Machine Learning

EXPERIENCE

Software Engineer Intern (Summer and Fall)

Environmental Health and Safety - ISU (EH&S)

May 2022 – December 2022

Ames, IA

- Developed and maintained 6+ .NET Core web applications with Agile methodology (Jira, BitBucket, Visual Studio)
- Redesigned 2+ applications using SOLID principle and MediatR to improve maintainability, all have gone into production
- Designed the UI using JS/JQuery, HTML, CSS and integrated Syncfusion components to reduce development time by 20%
- Utilized Factory and Dependency Injection design patterns, and Entity Framework and LINQ for backends

Facial Detection Live Streaming Web App

Personal Project (On [Glyochi.com](https://glyochi.com) ~ Deployed with Cloud Run)

December 2021 – January 2022

Ames, IA

- Ported my facial detection project below onto the web by using ReactJS for the frontend and Flask for the backend
- Increased video playback smoothness and minimized jittering by 10% by displaying frames at the appropriate time
- Reduced facial detection time in the server by 50% by handling resizing and gray scaling the image in the frontend
- Decreased server's response size by 95% by shifting the custom frame rendering task to the browser

Golfer Social Media App

Com S 309 Project (On Github.com/Glyochi)

August 2021 – November 2021

Ames, IA

- Developed an android app using Android Studio for the UI, Spring Boot for the server, and MySQL for the database
- Structured the frontend and backend using the MVC-Service design pattern for better maintainability and scalability
- Designed the REST API and business logic to provide all the functionalities the app needs
- Implemented a real-time public chat room for the app users using WebSocket
- Used CI/CD to automatically build, run Mockito tests, and deploy the server

Tilted Facial Detection (Computer Vision)

Personal Project ~ Python (On [Glyochi.com](https://glyochi.com) and Github.com/Glyochi)

June 2021 – August 2021

Ames, IA

- Refined OpenCV haar-cascade to better detect tilted faces by 30% by doing selective scans in different orientations
- Alleviated workload on the CPU and increased performance by 100% by incorporating multithreading into the program
- Designed and implemented custom debugging tools to help fix bugs and boost development speed

Tetris Web Application

Personal Project (On [Glyochi.com](https://glyochi.com))

July 2020 – August 2020

Ames, IA

- Created a Tetris web app with gameplay as close as possible to Tetris 99 using JavaScript
- Designed and implemented the game engine to simulate Tetris 99 physics and sound effects
- Reduced web browser's workload by engineering a graphic engine that only re-renders parts that are necessary

ACTIVITIES

Undergraduate Teaching Assistant

Computer Science 309

February 2022 – May 2022

Ames, IA

- Automated google doc and sheet file generation from data in CSV files using Apps Script
- Migrated 200+ student projects from one GitLab server to another automatically using bash script

Computer Science Tutor

Computer Science Help Room

August 2021 – May 2022

Ames, IA

- Assisted students with comprehending all 300-level Computer Science courses by identifying their knowledge gaps
- Guided students by reminding them of concepts taught in class or giving them examples of similar problems